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November 13, 2009

Via Electronic Submission

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Notice of Oral *Ex Parte* Communication
WT Docket Nos. 06-150
PS Docket No. 06-229
DA 09-1819

Dear Ms. Dortch:

This letter is to notify you that on November 10, 2009, Northrop Grumman Information Technology, Inc. ("Northrop Grumman") representatives Mark S. Adams, Director, Principal Architect, Networks and Communications, Office of the CTO, Thomas S. Afferton, Director of Strategy and Technology, Commercial State and Local Programs, and I participated in a meeting with representatives of the Commission's Public Safety and Homeland Security Bureau, Wireless Telecommunications Bureau, Office of Engineering and Technology, and Broadband Task Force being copied on this letter as shown below. We discussed the position of Northrop Grumman in the above-referenced proceedings, consistent with the written submissions of Northrop Grumman in those proceedings. In addition, Northrop Grumman provided the attached presentation.

In the discussion, Northrop Grumman highlighted the following points:

- The pending petitions for waiver submitted by state and local governments to use the 700 MHz Public Safety broadband spectrum to deploy broadband networks present the Commission with the real near-term opportunity to bring advanced services to public safety. Within a framework of a common set of guidelines, such systems can preserve and promote the goal of nationwide interoperability and connectivity, while moving forward where possible with mission-critical broadband networks and applications

ready to make a meaningful improvement in the speed and quality of emergency response.

- A nationwide clearinghouse for 700 MHz interoperability should be established to define and implement proper interoperability between regional networks from the beginning, and to provide a managed service platform allowing users to roam throughout the systems and access "home base" information in a secure and regulated fashion. Such a clearinghouse also could provide common services such as location-based services and network security (including cyber security monitoring). The Commission and the Public Safety Broadband Licensee should seek funding to allow for immediate organization of this common infrastructure bringing together the various regional networks that will be built by the waiver holders.

- To ensure nationwide interoperability and connectivity, core obligations must be established for these regional networks, and each licensee must be capable of interoperability/connectivity with adjacent 700 MHz public safety broadband networks, current or future. Interoperability is achievable via the enormous inherent flexibility of IP-based networks, and utilizing commercial broadband wireless and overall network open standards.

If you have any questions regarding this notice, please do not hesitate to contact me.

Sincerely,

Attachment

cc:
Admiral James Arden Barnett, Jr., Chief, Public Safety and Homeland Security Bureau
Jennifer A. Manner, Deputy Bureau Chief, Public Safety and Homeland Security Bureau
Behzad Ghaffari, Public Safety and Homeland Security Bureau
Brian Hurley, Public Safety and Homeland Security Bureau
Timothy May, Public Safety and Homeland Security Bureau
Ziad Sleem, Associate Chief, Technical Policy, Wireless Telecommunications Bureau
Walter Johnston, Chief, Electromagnetic Compatibility Division, Office of Engineering and Technology
Ronne Cho, Office of Strategic Planning and Policy Analysis, Broadband Task Force
Tom Peters, Office of Strategic Planning and Policy Analysis, Broadband Task Force

Northrop Grumman:

Benefits of 700 MHz Broadband Systems to Public Safety

Federal Communications Commission (FCC)

November 10, 2009

Information Systems - Divisions

NORTHROP GRUMMAN

DEFENSE Systems

- Defense IT infrastructure & applications
- Comms systems development & integration
- Theater and operational C2 systems
- Automated logistics
- Command centers integration

INTELLIGENCE Systems

- Prime systems integration
- Systems development
- Products
- Enterprise IT
- ISR
- Cybersecurity

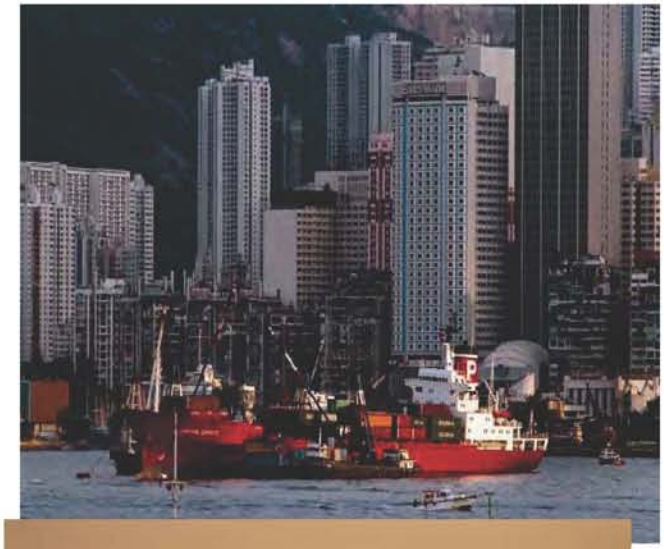
CIVIL Systems

- Enterprise systems integration
- Civil mission system development & integration
- IT transformation
- Next generation networking
- Secure Mobility
- Biometrics

ADVISORY Services

- Systems/enterprise engineering & integration
- Architectures & technical analysis
- Counter weapons of mass destruction

Critical Infrastructure Protection



- Maritime Domain Awareness
- Integrated Harbor Systems - Sonar, Marine Radars and Cameras
- Automated Vessel Identification Systems and Protection Systems
- Baggage and People Screening
- Risk Assessments, Security Processes and Training
- Air Traffic Control Safety Systems and Long Range Radars
- Geospatial Tracking
- Border Surveillance and Control
- Access Control and Perimeter Protection

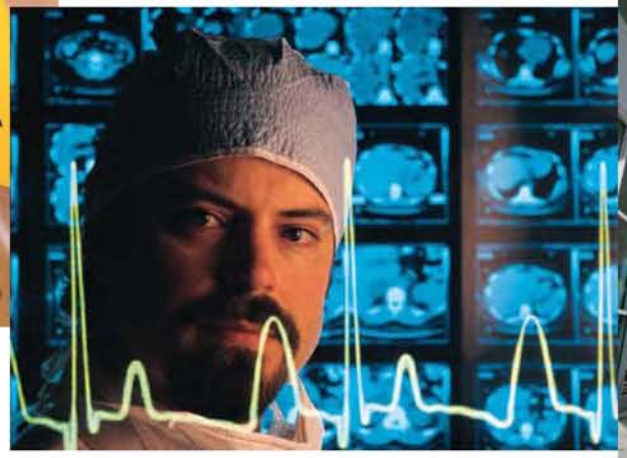
Interoperable Communications and First Responder Systems

- Secure, Reliable Broadband Wireless Communications
- Mission-Critical Communications and Networks
- High Speed Data and Video
- Data-Fusion & Sharing
- Emergency Coordination Centers
- Crisis Alerting Systems
- Public Safety and Law Enforcement Data Systems

Cyber Security, Identity Management and Information Analysis

- Information Assurance
- Secure Data Networks
- Collaboration Tools
- Biometric Systems
- Access Control and Privacy
- Immigration, Customs, Licensing Integration
- Diverse Information Analysis
- Fraud and Criminal Analysis
- Geospatial Referencing
- National Threat Counter-Terrorism Support

Chemical, Biological and Radiological Detection and Healthcare Protection



- Electronic Reporting and Surveillance System
- BioWatch Sensors & Integration
- Warning and Reporting Networks
- Health Data Warehouse
- Public Health Information Networks
- Environmental Surveillance and Detection Systems
- Biological, Chemical and Radiological Sensors
- Civil Support and Emergency Preparedness

New York City Wireless (NYCWiN)

- Provides broadband public-safety wireless services to NYC
  - Location Services, Video, Sensor Systems
- Most comprehensive network of its kind
  - 380 sq. miles, 97%+ Coverage, Redundant, Resilient Design
- End-to-end Security, Cyber, Physical, Data
- State-of-the-art data and video applications for first responders
- Northrop Grumman 24/7 Operations & Maintenance (O&M)
- Mission critical requirements based system architecture
- Defining the Future of Mobile Data Systems for the next generation

- Geographic coverage: 380 square miles
- Radio sites: ~ 400
- Network & Security Operations Centers: 2
- Potential user population:
  - 300,000+ City employees (initially ~10,000 users targeted in public safety & essential government services)
  - 15,000+ vehicles (initially ~3,000 vehicles targeted in PD, fire & sanitation)
  - 15,000+ fixed devices (initially ~2,500 traffic controllers targets plus selected video sources & call boxes)

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BROADBAND APPLICATIONS

PUBLIC SAFETY SCENARIOS

NYCWiN Operational Vision

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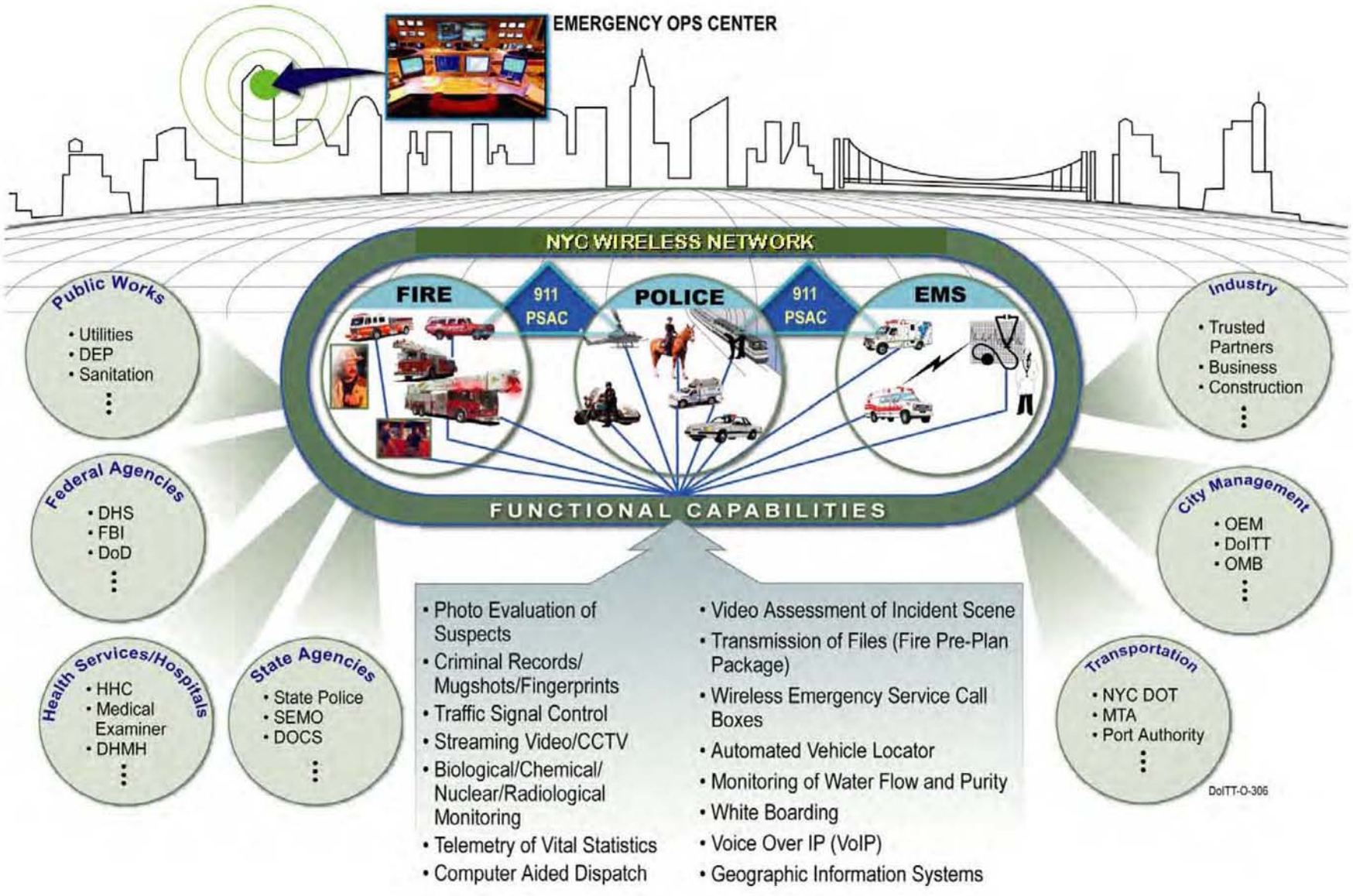

NYCWiN – Enabling Mobile Policing

- Field Force Enablement
  - Allows Police vehicles to access broadband connectivity to increase mobile capabilities for officers in the field and to allow functionality such as:
    - Database Queries
    - Preparing and submitting forms online in the field
    - Viewing photos (mug shots) in vehicles and on laptops
    - Accessing to haz-mat and other databases in the field
    - Mobile fingerprinting

- Number Plate Recognition
  - Deployment of fixed, portable & mobile units using NYCWiN for backhaul
- Interoperable Video / Wireless Incident Video
  - Deployment of mobile video capabilities for Mobile Command Posts and laptops
  - Ability to share video with Fire and Emergency Management Officials
- Sensors (e.g. Radiation)
  - Deployment of multiple fixed and portable sensors using NYCWiN for backhaul

NYCWiN Fire & Emergency Management Apps

Initial Deployments, Trials and Potential Uses:

- Field connectivity for Mobile Command/Mobile Data Vehicles
- Firefighter Tracking
  - Utilize NYCWiN connectivity to validate firefighter rosters and track locations using RFID embedded in firefighter bunker gear
- Automatic vehicle location for emergency response vehicles
- Interoperable Video / Wireless Incident Video
  - Mobile video deployed into Mobile Command Centers and Field Communications Units
  - Integrated with FDNY wireless / tactical video systems to allow fire-ground video to be viewed at the FDNY Operations Center
  - Transmission of NYPD aviation and news helicopter video to units in the field
  - Remote access to Fire, Police, Transportation and other video feeds

- On-Scene Tactical Control
  - Utilize NYCWiN connectivity for on-scene FDNY command centers
- Geospatial Intelligence
  - Utilize NYCWiN connectivity in FDNY ambulances to enable mobile mapping to assist EMS personnel in reaching the scene of emergencies
  - Transmission of floor plans and other critical information to the field

NYCWiN Government Services Apps

- Transportation
  - Remote Traffic Light Management
  - Wireless enabled traffic sensors
- Fleet management (multiple agencies)
  - Automatic vehicle location & monitoring with alerts & geo-fencing
  - Sanitation trucks, case worker vehicles, buses, etc.
- Environmental Protection
  - Automated water meter reading for >800,000 customers
  - Water quality and weather monitoring
  - Back-up connectivity for remote offices
- Field force automation (multiple agencies)
  - Remote data access for mobile case workers & inspectors
  - Direct upload of forms and photographs
  - On-site issuance of inspection approvals

Overall Benefits of Secure Broadband Applications

NORTHROP GRUMMAN

- Increased Workforce Mobilization, Efficiency & Safety
- Improved Situational Awareness for Neighborhood Officers and Command Centres
- Faster Response for Emergency and Government Services
- Improved visibility & faster response to attacks on critical infrastructure systems (transportation, water, etc.)
- Improved Agency Collaboration
- Reduced Crime
- Reduced Environmental Impacts
- Reduced Operational Costs, Increased City Revenues
- Reduced Future Investment Costs through reuse of NYCWiN infrastructure for other programs


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